HC1-56204

File No. B - 28 POD 1379-1383

# **NEW MEXICO OFFICE OF THE STATE ENGINEER**

# WR-07 APPLICATION FOR PERMIT TO DRILL A WELL WITH NO WATER RIGHT



(check applicable box):

Purpose:		Pollution Control And/Or Recovery		☐ Ground Source Heat Pump
Exploratory Well (Pump test)		Construction Site/Publi Works Dewatering	c [	Other(Describe):
Monitoring Well		Mine Dewatering		
A separate permit will be required	to app	ly water to beneficial use	e regardless if use i	is consumptive or nonconsumptive.
■ Temporary Request - Request	ed Sta	rt Date: 5/1/2017		Requested End Date: 12/31/2024
Plugging Plan of Operations Subn	nitted?	☐ Yes ■ No		
				75 75
. APPLICANT(S)				
Name: Homestake Mining Company of Ca	ilifornia		Name:	(A)
Contact or Agent:	chec	k here if Agent	Contact or Age	
Thomas Wohlford				
Mailing Address: P.O. Box 98, Hwy 605			Mailing Addres	ss:
City: Grants			City:	
State: New Mexico	Zip Co	ode: 87020	State:	Zip Code:
Phone: (505)290-2187 Phone (Work):		Home 🔳 Cell	Phone: Phone (Work):	☐ Home ☐ Cell
E-mail (optional): wohlford@barrick.com			E-mail (optiona	ai):

FOR OSE INTERNAL USE	Application for Permit	t, Form WR-07, Re	ev 11/17/16
File No.: 8-28	Trn. No.: 607	724 R	eceipt No.: 156204 \$25
Trans Description (optional):	28 PODS1.	379-1383	3
Sub-Basin:	PC	:W/LOG Due Date	: 6/1/2018
Dobe 1276	1200		Page 1 of 3

#### 2. WELL(S) Describe the well(s) applicable to this application.

(Lat/Long - WGS84).		•	State Plane (NAD 83), UTM (NAD 83), or Latitude/Longitude
☐ NM State Plane (NAD83) ☐ NM West Zone ☐ NM East Zone ☐ NM Central Zone		JTM (NAD83) (Me ]Zone 12N ]Zone 13N	ters) Lat/Long (WGS84) (to the nearest 1/10 <sup>th</sup> of second)
Well Number (if known):	X or Easting or Longitude:	Y or Northing or Latitude:	Provide if known: -Public Land Survey System (PLSS) (Quarters or Halves , Section, Township, Range) OR - Hydrographic Survey Map & Tract; OR - Lot, Block & Subdivision; OR - Land Grant Name
POD 1379	107°52'7.7"	35°15'20.0"	SE SWNW Section 23, T12N, R10W
DD4 POD 1380	107°52'9.3"	35°15'14.1"	NWSW Section 23, T12N, R10W
DD5 <i>Pop 138</i> I	107°52'18.4"	35°15'7.5"	5 € NESE Section 22, T12N, R10W
DD6 Po <b>2</b> 1382	107°52'22.3"	35°15'10.8"	NF NESE Section 22, T12N, R10W
POD 1383	107°52'25.7"	35°15'13.6"	ルル NESE Section 22, T12N, R10W
NOTE: If more well location Additional well descriptions	s need to be describ are attached:	ed, complete for Yes 🔳 No	m WR-08 (Attachment 1 – POD Descriptions) If yes, how many
Other description relating well	to common landmark	s, streets, or othe	Departure and The Control of the Con
Well is on land owned by: Hor	nestake Mining Comp	any of California	
If yes, how many 5	<del></del>		scribed, provide attachment. Attached? 🗹 Yes 🔳 No
Approximate depth of well (fer			Outside diameter of well casing (inches): 4 to 5
Driller Name: Yellow Jac	Lat Drilling :	Services	Driller License Number: 1458 G

#### 3. ADDITIONAL STATEMENTS OR EXPLANATIONS

Five wells are to be installed as monitoring wells for a lined evaporation pond. The estimated depths for the five wells are DD3 - 70 feet, DD4 - 85 feet, DD5 - 55 feet, DD6 - 40 feet, and DD7 - 20 feet. If possible, the wells will be installed with hollow stem auger drilling. If hollow stem drilling is used, a casing size of up to 5 inches may be used depending on the auger size. If other drilling techniques are used, the casing inside diameter will be 4.5 inches. The monitoring will continue until the evaporation pond is decommissioned. The pond is tentatively scheduled for decommissioning in 2024, but an extension of the pond use may be necessary.

FOR OSE INTERNAL USE

Application for Permit, Form WR-07

File No.: 8-28

Tm No.: 607924

boxes, to indicate the information has been included and/or attached to this application: Pollution Control and/or Recovery: Construction Mine De-Watering: Exploratory: Include a plan for pollution ☐ Include a ☐ Include a plan for pollution De-Watering: control/recovery, that includes the following: Include a description of the description of control/recovery, that includes the any proposed ☐ A description of the need for mine proposed dewatering following: dewatering. pump test, if ☐ A description of the need for the operation, The estimated duration of The estimated maximum period of time pollution control or recovery operation. applicable. ☐ The estimated maximum period of for completion of the operation. the operation. ☐ The source(s) of the water to be diverted. time for completion of the operation. ☐ The maximum amount of ☐The geohydrologic characteristics of the water to be diverted, ☐ The annual diversion amount. aquifer(s). A description of the need ☐ The annual consumptive use The maximum amount of water to be for the dewatering operation, amount. diverted per annum. ☐ The maximum amount of water to be and. A description of how the The maximum amount of water to be diverted and injected for the duration of diverted for the duration of the operation. the operation. diverted water will be disposed ☐The quality of the water. The method and place of discharge. ☐ The method of measurement of Ground Source Heat Pump: ☐The method of measurement of water Monitoring: Include the water produced and discharged. ☐ Include a description of the diverted. ☐ The recharge of water to the aguifer. reason for the The source of water to be injected. geothermal heat exchange Description of the estimated area of ☐ The method of measurement of project. monitoring hydrologic effect of the project. water injected. ☐ The number of boreholes well, and, ☐ The characteristics of the aquifer. ☐ The method and place of discharge. for the completed project and ■ The An estimation of the effects on surface The method of determining the required depths. duration water rights and underground water rights of the planned resulting annual consumptive use of ☐ The time frame for from the mine dewatering project. constructing the geothermal water and depletion from any related monitoring. stream system. heat exchange project, and, A description of the methods employed to estimate effects on surface water rights and Proof of any permit required from the The duration of the project. underground water rights. New Mexico Environment Department. Preliminary surveys, design ☐Information on existing wells, rivers, An access agreement if the data, and additional applicant is not the owner of the land on information shall be included to springs, and wetlands within the area of provide all essential facts which the pollution plume control or hydrologic effect. recovery well is to be located. relating to the request. **ACKNOWLEDGEMENT** Thomas Wohlford I, We (name of applicant(s)) Print Name(s) affirm that the foregoing statements are true to the best of (my, our) knowledge and belief. Applicant Signature **ACTION OF THE STATE ENGINEER** This application is: **Z** approved partially approved \_\_\_ denied provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare and further subject to the attached conditions of approval. day of June 20 17, for the State Engineer, Witness my hand and seal this Tom Blaine P.E. State Engineer \_\_\_, State Engineer Signature Title: Print Application for Permit, Form WR-07 FOR OSE INTERNAL USE

File No.: 3-28

4. SPECIFIC REQUIREMENTS: The applicant must include the following, as applicable to each well type. Please check the appropriate

Page 3 of 3

# NEW I...XICO OFFICE OF THE STARE ENGINEER PERMIT TO DRILL WELL WITH NO CONSUMPTIVE USE CONDITIONS OF APPROVAL

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the following conditions of approval:

Permittee:

Homestake Mining Company of California

P.O. Box 98

Grants, NM 87020

**Permit Number:** 

1605 and B-28

**Application File Date:** 

April 27, 2017

**Priority:** 

N/A

Source:

Groundwater

**Points of Diversion:** 

B-28 POD1379 (DD3) located at a point where Latitude = 35°15'20.0" North and Longitude = 107°52'7.7" West, WGS84, within the SE SW NW, Section 23, Township 12 North, Range 10 West, Cibola County, New Mexico.

B-28 POD1380 (DD4) located at a point where Latitude = 35°15'9.3" North and Longitude = 107°52'9.3" West, WGS84, within the NW NW SW, Section 23, Township 12 North, Range 10 West, Cibola County, New Mexico.

B-28 POD1381 (DD5) located at a point where Latitude = 35°15'7.5" North and Longitude = 107°52'18.4" West, WGS84, within the SE NE SE, Section 22, Township 12 North, Range 10 West, Cibola County, New Mexico.

B-28 POD1382 (DD6) located at a point where Latitude = 35°15'10.8" North and Longitude = 107°52'22.3" West, WGS84, within the NE NE SE, Section 22, Township 12 North, Range 10 West, Cibola County, New Mexico.

B-28 POD1379 (DD7) located at a point where Latitude = 35°15'13.6" North and Longitude = 107°52'25.7" West, WGS84, within the NW NE SE, Section 22, Township 12 North, Range 10 West, Cibola County, New Mexico.

Page 1 of 2

File No: 1605 and B-28

# NEW I...XICO OFFICE OF THE STAIL ENGINEER PERMIT TO DRILL WELL WITH NO CONSUMPTIVE USE CONDITIONS OF APPROVAL

All wells are located on land owned by Homestake Mining Company of California.

**Purpose of Use:** 

Monitoring Well

Place of Use:

N/A

**Amount of Water:** 

N/A

- 1. No water shall be appropriated and beneficially used under this permit.
- 2. Wells B-28 POD1379 through 1383 shall be drilled and constructed by a driller licensed in the State of New Mexico in accordance with 19.27.4 NMAC.
- 3. Completed and properly executed Well Records on the form provided by the State Engineer shall be filed within 20 days after the wells are drilled.
- 4. The Permittee is responsible for obtaining an access agreement.
- 5. If artesian water is encountered, the Permittee and driller shall comply with Subsection C of 19.27.4.31 NMAC and all rules and regulations pertaining to the drilling and casing of the artesian wells.
- 6. Wells B-28 POD1379 through 1383 shall be plugged upon completion of the permitted use, and a plugging report shall be filed with the State Engineer within 20 days after the wells are plugged.
- 7. Wells B-28 POD1379 through 1383 must be completed within one year of the approval date of this permit.
- 8. Water shall be used from the well for monitoring purposes only, unless and until a permit for a specific use has been issued by the State Engineer.
- 9. Pursuant to Section 72-8-1 NMSA, the permittee shall allow the State Engineer and his representatives entry upon private property for the performance of their respective duties, including access to the wells for meter readings and water level measurements.

Witness my hand and seal this \_\_\_\_\_ day of \_\_\_\_\_ 2017

Tom Blaine, P.E. State Engineer

Bv:

Christopher Burrus Water Resource Specialist

District 1

Page 2 of 2

File No: 1605 and B-28



# STATE OF NEW MEXICO OFFICE OF THE STATE ENGINEER

# **DISTRICT 1**

TOM BLAINE, P.E.
NEW MEXICO STATE ENGINEER

5550 San Antonio Drive, N.E. Albuquerque, NM 87109 (505) 383-4000

June 1, 2017

File No.: 1605 and B-28

Homestake Mining Company of California c/o Thomas Wohlford P.O. Box 98 Grants, NM 87020

RE: MONITORING WELL PERMIT B-28 POD1379 through POD1383

Greetings,

Enclosed is your copy of Permit No.: B-28 POD1379 through POD1383 to drill five (5) monitoring wells with no consumptive use, has been approved in accordance with the attached Conditions of Approval.

Sincerely

Christopher Burrus

Water Resource Specialist Albuquerque, OSE, District 1

CB;cb;

Enclosure as stated

Cc: WRAB

# **General Information:**

Application ID:26

Date: 06-01-2017

Time: 09:42:32

WR File Number: B-00028-1379

Purpose: POINT OF DIVERSION

Applicant First Name: HOMESTKE Applicant Last Name: MINING

> GW Basin: BLUEWATER County: CIBOLA

Critical Management Area Name(s): NONE

Special Condition Area Name(s): SAN MATEO CREEK HEALTH ADVISORY

Land Grant Name: NON GRANT

# PLSS Description (New Mexico Principal Meridian):

NW 1/4 of SE 1/4 of SW 1/4 of NW 1/4 of Section 23, Township 12N, Range 10W.

#### **Coordinate System Details:**

# **Geographic Coordinates:**

Latitude:

35 Degrees 15 Minutes 20.0 Seconds N

Longitude:

107 Degrees 52 Minutes 7.7 Seconds W

#### Universal Transverse Mercator Zone: 13N

NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) NAD 1927 (Meters)

NAD 1927 (Survey Feet)

N: 3,905,157 E: 238,997 N: 12,812,170 E: 784,108

N: 3,904,954 E: 239,046 N: 12,811,502 E: 784,271

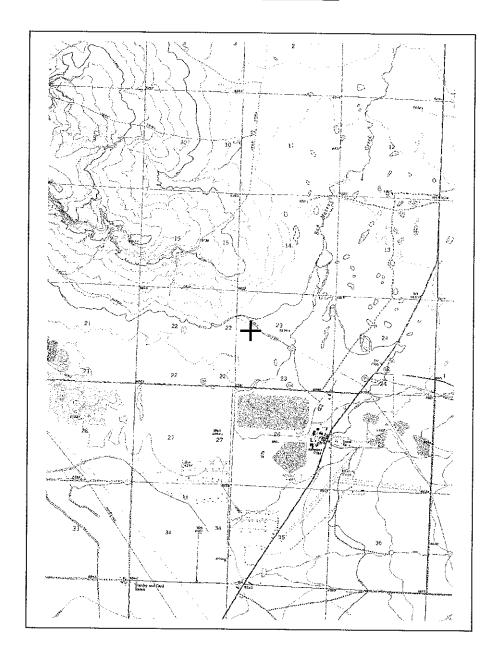
#### State Plane Coordinate System Zone: New Mexico West

NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) N: 471,932 E: 826,772 N: 1,548,330 E: 2,712,502

NAD 1927 (Meters) NAD 1927 (Survey Feet)

N: 471,914 E: 149,228 N: 1,548,270 E: 489,593

# **Locator Tool Report**



Northing/Easting: UTM83(92) (Meter): N: 3,905,157

Northing/Easting: SPCS83(92) (Feet): N: 1,548,330 E: 2,712,502

GW Basin: Bluewater

Page 2 of 2

Print Date: 06/01/2017

E: 238,997

#### General Information:

Application ID: 26

Date: 06-01-2017

Time: 09:37:59

WR File Number: B-00028-1380

Purpose: POINT OF DIVERSION

Applicant First Name: HOMESTKE Applicant Last Name: MINING

> GW Basin: BLUEWATER County: CIBOLA

Critical Management Area Name(s): NONE

Special Condition Area Name(s): SAN MATEO CREEK HEALTH ADVISORY

Land Grant Name: NON GRANT

# PLSS Description (New Mexico Principal Meridian):

NE 1/4 of NW 1/4 of NW 1/4 of SW 1/4 of Section 23, Township 12N, Range 10W.

# **Coordinate System Details:**

# Geographic Coordinates:

Latitude:

35 Degrees 15 Minutes 14.1 Seconds N

Page 1 of 2

Longitude:

107 Degrees 52 Minutes 9.3 Seconds W

#### Universal Transverse Mercator Zone: 13N

NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) NAD 1927 (Meters)

NAD 1927 (Survey Feet)

N: 3,904,977 E: 238,951 N: 12,811,578 E: 783,958

N: 3,904,773 E: 239,001

N: 12,810,909 E: 784,121

# State Plane Coordinate System Zone: New Mexico West

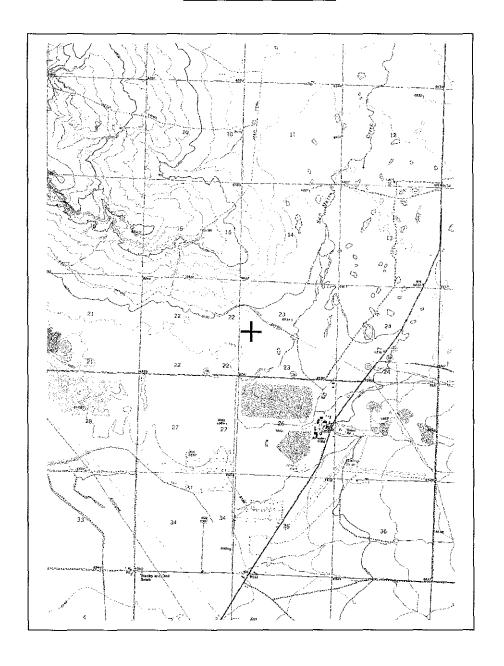
NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) NAD 1927 (Meters) NAD 1927 (Survey Feet)

N: 471,750 E: 826,732 N: 1.547.733 E: 2.712.369

N: 471.732 N: 1,547,673 E: 489,460

E: 149.188

# **Locator Tool Report**



State V

WR File Number: B-00028-1380 Scale: 1:62,008

Northing/Easting: UTM83(92) (Meter): N: 3,904,977 E: 238,951

GW Basin: Bluewater

Page 2 of 2

#### **General Information:**

Application ID: 26

Date: 06-01-2017

Time: 09:38:44

WR File Number: B-00028-1381

Purpose: POINT OF DIVERSION

Applicant First Name: HOMESTKE Applicant Last Name: MINING

> GW Basin: BLUEWATER County: CIBOLA

Critical Management Area Name(s): NONE

Special Condition Area Name(s): SAN MATEO CREEK HEALTH ADVISORY

Land Grant Name: NON GRANT

# PLSS Description (New Mexico Principal Meridian):

NE 1/4 of SE 1/4 of NE 1/4 of SE 1/4 of Section 22, Township 12N, Range 10W.

# **Coordinate System Details:**

#### **Geographic Coordinates:**

Latitude:

35 Degrees 15 Minutes 7.5 Seconds N

Longitude:

107 Degrees 52 Minutes 18.4 Seconds W

#### Universal Transverse Mercator Zone: 13N

NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) NAD 1927 (Meters) NAD 1927 (Survey Feet)

N: 3,904,780 E: 238,715 N: 12,810,932 E: 783,184

N: 3,904,576 E: 238,765 N: 12,810,264 E: 783,347

# State Plane Coordinate System Zone: New Mexico West

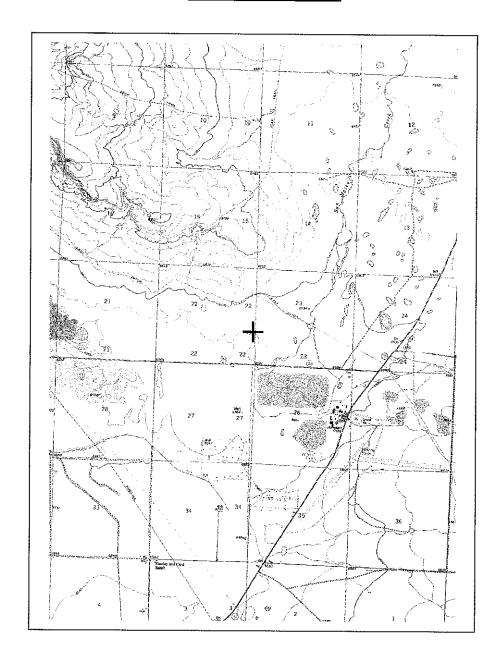
NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) NAD 1927 (Meters) NAD 1927 (Survey Feet)

N: 471,547 N: 1,547,066 E: 2,711,614

E: 826,502 E: 148,958

N: 471,529 N: 1.547,006 E: 488,705

# **Locator Tool Report**



VA Controlssion

Northing/Easting: UTM83(92) (Meter): N: 3,904,780

GW Basin: Bluewater

Page 2 of 2

Print Date: 06/01/2017

E: 238,715

#### General Information:

Application ID:26

Date: 06-01-2017

Time: 09:39:53

WR File Number: B-00028-1382

Purpose: POINT OF DIVERSION

Applicant First Name: HOMESTKE Applicant Last Name: MINING

> GW Basin: BLUEWATER County: CIBOLA

Critical Management Area Name(s): NONE

Special Condition Area Name(s): SAN MATEO CREEK HEALTH ADVISORY

Land Grant Name: NON GRANT

# PLSS Description (New Mexico Principal Meridian):

SW 1/4 of NE 1/4 of NE 1/4 of SE 1/4 of Section 22, Township 12N, Range 10W.

# Coordinate System Details:

# Geographic Coordinates:

Latitude:

35 Degrees 15 Minutes 10.8 Seconds N

Longitude:

107 Degrees 52 Minutes 22.3 Seconds W

#### Universal Transverse Mercator Zone: 13N

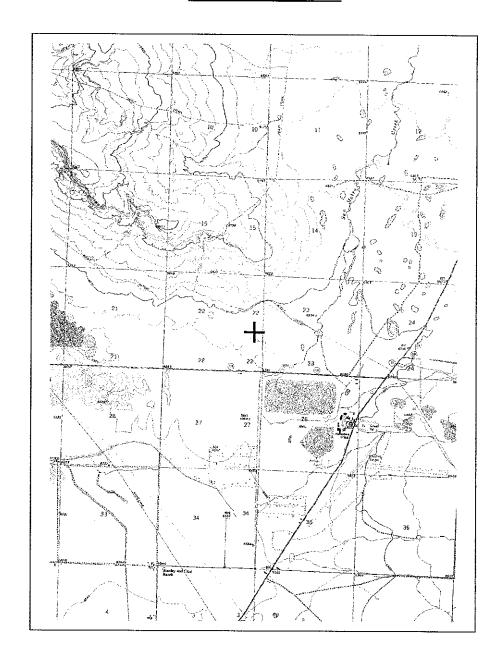
N: 3.904.885 E: 238,619 NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) N: 12,811,275 E: 782,870 N: 3,904,681 E: 238,669 NAD 1927 (Meters) N: 12,810,607 E: 783,033 NAD 1927 (Survey Feet)

# State Plane Coordinate System Zone: New Mexico West

E: 826,403 N: 471,649 NAD 1983(92) (Meters) N: 1,547,400 E: 2,711,291 NAD 1983(92) (Survey Feet) N: 471,630 E: 148,859 NAD 1927 (Meters) N: 1,547,340 E: 488,382 NAD 1927 (Survey Feet)

> Print Date: 06/01/2017 Page 1 of 2

# **Locator Tool Report**



Northing/Easting: UTM83(92) (Meter): N: 3,904,885 E: 238,619

Northing/Easting: SPCS83(92) (Feet): N: 1,547,400 E: 2,711,291

GW Basin: Bluewater

Page 2 of 2 Print Date: 06/01/2017

#### **General Information:**

Application ID: 26

Date: 06-01-2017

Time: 09:40:31

WR File Number: B-00028-1383

Purpose: POINT OF DIVERSION

Applicant First Name: HOMESTKE Applicant Last Name: MINING

> GW Basin: BLUEWATER County: CiBOLA

Critical Management Area Name(s): NONE

Special Condition Area Name(s): SAN MATEO CREEK HEALTH ADVISORY

Land Grant Name: NON GRANT

# PLSS Description (New Mexico Principal Meridian):

NE 1/4 of NW 1/4 of NE 1/4 of SE 1/4 of Section 22, Township 12N, Range 10W.

# **Coordinate System Details:**

# Geographic Coordinates:

Latitude:

35 Degrees 15 Minutes 13.6 Seconds N

Longitude:

107 Degrees 52 Minutes 25.7 Seconds W

# Universal Transverse Mercator Zone: 13N

NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) NAD 1927 (Meters) NAD 1927 (Survey Feet)

N: 3,904,973 E: 238,536 N: 12,811,567 E: 782,596

N: 3,904,770 E: 238,586 N: 12,810,898 E: 782,759

# State Plane Coordinate System Zone: New Mexico West

NAD 1983(92) (Meters) NAD 1983(92) (Survey Feet) NAD 1927 (Meters) NAD 1927 (Survey Feet)

N: 471,735 N: 1,547,683

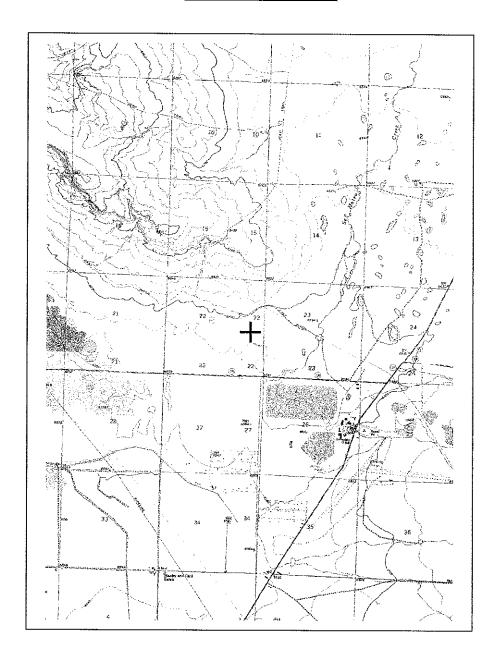
E: 826,317 E: 2,711,009

N: 471,717 N: 1,547,623

E: 148,773 E: 488,100

Page 1 of 2 Print Date: 06/01/2017

# **Locator Tool Report**



Northing/Easting: UTM83(92) (Meter): N: 3,904,973 E: 238,536

GW Basin: Bluewater

Page 2 of 2

OFFICE OF THE STATE ENGINEE	R/INTERȘTATE STREAM CO	MMISSION - A	LBUQUERQUE OFF	ICE
OFFICIAL RECEIPT NUMBER: 1 - <b>56204</b> STOTAL: 25 00 RECEIVED: 1	DATE: 4/27/17 and 80	/FILE NO.: //./DOLLARS CHECK	NO.: _ 264_ CASH: _	
PAYOR: TO STAKE WITH A STATE OF THE PAYOR IN	opropriate type of filing. Complete the receipt information	ation. Original to payor; pink		
A. Ground Water Filing Fees  1. Change of Ownership of Water Right \$ 2.00  2. Application to Appropriate or Supplement Domestic 72-12-1 Well \$ 125.00  3. Application to Repair or Deepen 72-12-1 Well \$ 75.00  4. Application for Replacement 72-12-1 Well \$ 75.00  5. Application to Change Purpose of Use 72-12-1 Well \$ 75.00  6. Application for Stock Well \$ 5.00  7. Application to Appropriate Irrigation, Municipal, or Commercial Use \$ 25.00  8. Declaration of Water Right \$ 1.00  9. Application for Supplemental Non 72-12-1 Well \$ 25.00  10. Application to Change Place or Purpose of Use Non 72-12-1 Well \$ 25.00  11. Application to Change Place or Purpose of Use Non 72-12-1 Well \$ 25.00  12. Application to Change Point of Diversion and Place and/or Purpose of Use from Surface Water to Ground Water \$ 50.00  12. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Ground Water \$ 50.00  13. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Ground Water \$ 50.00  13. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Ground Water \$ 50.00  14. Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Ground Water \$ 50.00  15. Application to Repair or Deepen Non 72-12-1 Well \$ 25.00  16. Application for Extension of Time \$ 25.00  17. Proof of Application to Beneficial Use \$ 25.00  18. Notice of Intent to Appropriate \$ 25.00	<ol> <li>Surface Water Filing Fees</li> <li>Change of Ownership of a Water Right</li> <li>Declaration of Water Right</li> <li>Amended Declaration</li> <li>Application to Change Point of Diversion and Place and/or Purpose of Use from Surface Water to Surface Water</li> <li>Application to Change Point of Diversion and Place and/or Purpose of Use from Ground Water to Surface Water</li> <li>Application to Change Point of Diversion</li> <li>Application to Change Place and/or Purpose of Use</li> <li>Application to Appropriate</li> <li>Notice of Intent to Appropriate</li> <li>Application for Extension of Time</li> <li>Supplemental Well to a Surface Right</li> <li>Return Flow Credit</li> <li>Proof of Completion of Works</li> <li>Proof of Application of Water to Beneficial Use</li> <li>Water Development Plan</li> <li>Declaration of Livestock Water Impoundment</li> <li>Application for Livestock Water Impoundment</li> </ol>	C. Well	ication	\$ 50.00 \$ 50.00 \$ 50.00 \$\$ \$
	All fees are non-refundabl	e		



# New Mexico Office of the State Engineer Driller Summary

**Driller Name:** 

RICHARD LEBLANC

4.450

1458 1458

Legacy License Number: License Number:

License Issue Date:

11/02/2016

License Expiration

10/31/2018

Date: Compliance Status: Phone

(602) 453-3252

Number: Email

RICHARD@YJDRILLING.COM

Address: Address:

P.O. BOX 801

GILBERT, AZ 85299

License Status:

#### Methodologies

AIR ROTARY DRILLING

MUD ROTARY DRILLING

REVERSE CIRCULATION DRILLING

#### **Drill Rig Supervisors**

AARON JAMES ADAMS

TIMOTHY BAIRD

TODD CAHILL

SEAN CARRIGAN

JOHN CHAVES

CARLOS D. HERNANDEZ

CLIFFORD HILLMAN

RICHARD HOYT

RICHARD HOYT

**CHARLES JOHNSON** 

SERGIO RUFINO JORGE

JACOB LAGANA

THOMAS LANEY

STEVEN LARA

JASON MAYS

JASON MAYS

JOSE MUNGUIA

MARION E. PHILLIPS JR.

CLIFFORD RAINBOLT

CLIFFORD RAINBOLT

YOVANNI ROSAS

ROJELIO RUBIO

KATHERINE SANGSTER

ISMAEL SAPIEN

QUENTIN STEVENS

JOSEPH A. VALENTINE

MARC ROLAND WILLIAMS

# Company

Information

**Drill Rigs** 

Liability Ins Continuous Bond Exp

Company
YELLOW JACKET

Exp Date 04/01/2018 Bond? Date

Location GILBERT, AZ 85299 Email Address

Phone

RICHARD@YJDRILLING.COM(602) 453-3252

DRLG. SERV. LLC

Make	Model :	Serial Number
ATLAS COPCO	T3W	21309
CENTRAL MINE	850	236112 (RIG#105)
CENTRAL MINE	1250 (1987)	86779 (RIG#113)
CENTRAL MINE	85	346776 (RIG# 115)
CENTRAL MINE	85	46743759 (RIG# 120)
FOREMOST	DR24HD	112603 (RIG #123)
FOREMOST	DR24HD	162752
LIMITED ACCESS	L-12-T	117411 (RIG#108)
LONGYEAR	BK-81-HD	0594-121 (RIG # 102)
LONGYEAR	BK-81-HD	BK81-1194-124
LONGYEAR	BK-81-XHD	BK81-1194-122 (RIG#
LONGYEAR		BK-81HD-1192_112
PULSTAR	P12000	70012-IN (RIG# 125)
PULSTAR	P12000	203009 (RIG# 124)
PULSTAR	P12000	112113-IN (RIG# 133)
SMEAL	4T	F450165 (RIG#118)
SPEEDSTAR	50K-CH	907798 (RIG#119)
SPEEDSTAR	50K-CH	907609 (RIG#121)
SPEEDSTAR	110K	907623 (RIG#117)
SPEEDSTAR	CH40K	907512
SPEEDSTAR	CH50K	907932 (RIG#129)
SPEEDSTAR	CH50K	907933 (RIG# 128)
TS1	150 SONIC	TS1155 (RIG# 130)
TS1	150 SONIC	TS1168 (RIG# 131)
VACMASTER	4000	0501-501VDD-54

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

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**DRILLER SUMMARY** 

# Supplemental Monitoring Well Locations for EP-3

# Introduction

The following discussion describes the proposed locations and construction of additional monitoring wells for Evaporation Pond #3 (EP-3). A recommendation for the location of these wells was requested by Tom Wohlford. The additional monitoring wells would expand the monitoring system for EP-3, and could potentially provide additional background alluvial characterization up-gradient of the Large Tailings Pile (LTP).

# **Discussion and Recommendations**

The proposed additional well locations are shown in the attached figure (blue symbols) along with existing alluvial wells DD and DD2. Both well DD and well DD2 provide alluvial monitoring that could potentially reveal impacts by leakage from EP-3. The five proposed monitoring wells include one upgradient well (DD3), two wells (DD4 and DD5) located to supplement the existing coverage on the south and east sides of EP-3, and two wells (DD6 and DD7) that provide coverage on the southwest side of EP-3 in an area where the alluvium is not likely to be saturated. The general direction of alluvial ground-water flow is from northeast to southwest.

With the exception of well DD3, the proposed wells are located within the interior fence around EP-3 and at a distance of 70 to 90 feet from the toe of the EP-3 outer berm. Although the wells could be located slightly closer to EP-3, this would make them more susceptible to damage during maintenance of the pond berms. Well DD3 is planned to be located just inside the exterior fence surrounding EP-3 and up-gradient of EP-3. The tabulation below presents the proposed completion information for the wells.

Existing Wells

Existing Well	<u>13</u>								
			Well		Approx. Land	Depth to Base	Est. Base of	Estimated	Perforation
Well Name	State Plane	State Plane	Depth	Casing Size	Surface Elev.	of Alluvium	Alluvium Elev.	WLE	Interval
	Easting	Northing	(feet)	(inch)	(ft-MSL)	(ft-LSD)	(ft-MSL)	(ft-MSL)	(ft-LSD)
DD	488943	1546989	78.5	4	6590	83	6507	6545.1	40 - 80
DD2	489251	1547439	94.3	4	6591	80	6511	6546.9	50 - 90

Proposed Wells

1 roposta me	900								
			Proposed			Estimated	Estimated		Proposed
	Proposed	Proposed	Well	Proposed	Approx. Land	Depth to Base	Base of	Estimated	Perforation
Well Name	State Plane	State Plane	Depth	Casing Size	Surface Elev.	of Alluvium	Alluvium Elev.	WLE	Interval
	Easting	Northing	(feet)	(inch)	(ft-MSL)	(ft-LSD)	(ft-MSL)	(ft-MSL)	(ft-LSD)
DD3	489590	1548270	70	4.5	6594	69	6525	6548.5	50-70
DD4	489460	1547680	85	4.5	6592	84	6508	6547.5	45-85
DD5	488700	1547010	55	4.5	6588	56	6532	6545	45-55
DD6	488380	1547350	40	4.5	6589	37	6552	?	30-40
DD7	488100	1547630	20	4.5	6589	19	6570	?	10-20

The recommended completion for the wells is similar to that used for numerous alluvial aquifer wells installed near the site over the last three years. The recommended casing is 4.5 inch PVC (SDR-21, Schedule 40 or heavier). Because it is relatively important to detect the base of the alluvium, cuttings samples should be collected, examined, and described on five foot or finer intervals. If the Chinle shale is not encountered with the proposed drilling depth, the drilling should continue for an additional fifteen feet or until the Chinle Shale is detected. Conversely, if the Chinle Shale is encountered at a shallower depth

than expected, the drilling should continue only far enough to confirm the contact with the Chinle Shale. If the depth of the drilling to the contact with Chinle Shale (defining the base of alluvium) differs significantly from the tabulation above, the well depths and perforation interval should be shifted up or down to conform with the drilling depths.

The wells should be installed with a sand pack around the perforations and extending to approximately five feet above the top of the perforations. The sand and perforation size for the typical HMC alluvial wells can be used for the proposed wells. A bentonite chip or pellet seal should be used to fill the annulus from the top of the sand to the land surface.

# **Permitting Considerations**

The proposed additional well locations are outside of the area covered by the New Mexico Office of the State Engineer (OSE) permit file numbers 1605 and B-28. Two potential options for permitting of the proposed wells are described below.

- The proposed wells could be permitted as monitoring wells with the OSE. If permitted as monitoring wells, the wells could not be used for injection or collection, but the permitting process is streamlined in that monitoring wells are not subject to protests by other users. This is the recommended approach.
- The active OSE permits allow drilling of numerous collection or injection wells in the On-Site area and there are still some permitted wells available under the existing permits. A request could be made to the OSE to shift the location of five wells under the existing permit to the EP-3 area. One advantage to this approach is that, if remedial efforts are necessary in the EP-3 area, the wells could potentially be used for collection or injection.



Thomas Wohlford Interim Closure Manager

10 April 2017

Office of the State Engineer 5550 San Antonio Dr., NE Albuquerque, New Mexico 87109-4127

**RE: Application for Permit to Drill Monitoring Wells** 

Dear Sir or Madam,

Homestake Mining Company of California (HMC) is submitting the attached form <u>WR-07</u> <u>Application for Permit to Drill a Well With No Water Right</u> to install five additional monitoring wells on the perimeter of a lined evaporation pond. The evaporation pond is located at the HMC site north of Grants New Mexico. HMC's contact with the Office of the State Engineer on other water rights issues has been Chris Burrus.

The five additional wells will be installed to the approximate base of the alluvium at the site with expected depths ranging from 20 feet to 85 feet. The casing will be PVC with commercial well screen extending over the approximate saturated interval, if present, from the base of the alluvium. If saturation is present, the wells will be used to obtain water samples and to measure water levels.

The wells will be monitored until the pond is decommissioned. The decommissioning is tentatively planned for 2024, but if the pond continues to be used after 2024, the wells will continue to be monitored. When the pond is decommissioned and the wells are no longer needed, they will be plugged and abandoned using the procedures and methods prescribed by the Office of the State Engineer.

Technical questions concerning this application can be directed to:

Tom Michel Hydro-Engineering LLC 4685 East Magnolia Casper, WY 82604 Phone: (307)266-6597 hydro@alluretech.net

Thank you very much for your time and attention, if you have any questions regarding the foregoing information, I can be reached at 505-287-4456 extension 34 or directly via cell phone at 505-290-2187.



10 April 2017

Respectfully,

Thomas Wohlford, Hydrogeologist, CPG

Thema P. Wolferd

Interim Closure Manager

HOMESTAKE MINING COMPANY OF CALIFORNIA

# Copy To:

H. Burns, Barrick, Toronto, Ontario (electronic copy)

G. Hoffman, Hydro-Engineering, Casper, Wyoming (electronic copy)

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